CONTENTS

Editorial

N.Y.-s. Kiang (U.S.A.)
Curious oddments of auditory-nerve studies 1

COCHLEAR MORPHOLOGY AND MECHANICS 17

L.U.E. Kohllöffel (F.R.G.)
Cochlear mechanics: Coiling effects (I, II) and the absorption equation (III) 19

D.M. Freeman (U.S.A.)
Anatomical model of the cochlea of the alligator lizard 29

J.L. Goldstein (U.S.A., Israel)
Modeling rapid waveform compression on the basilar membrane as multiple-bandpass-nonlinearity filtering 39

HAIR CELLS 61

M.L. Wiederhold, J.S. Sharma, B.P. Driscoll and J.L. Harrison (U.S.A.)
Development of the statocyst in *Aplysia californica* I. Observations on statoconial development 63

M.J. Mulroy, R.F. Fromm and S. Curtis (U.S.A.)
Changes in the synaptic region of auditory hair cells during noise-induced temporary threshold shift 79

J.M. Goldberg, A. Lysakowski and C. Fernández (U.S.A.)
Morphophysiological and ultrastructural studies in the mammalian cristae ampullares 89

MORPHOLOGY OF AUDITORY NERVE 103

M.C. Brown and J.V. Ledwith, III (U.S.A.)
Projections of thin (type-II) and thick (type-I) auditory-nerve fibers into the cochlear nucleus of the mouse 105

R. Romand, H. Sobkowicz, M. Emmerling, D. Whitlon and D. Dahl (France, U.S.A.)
Patterns of neurofilament stain in the spiral ganglion of the developing and adult mouse 119

D.D. Simmons, L. Manson-Gieseke, T.W. Hendrix and S. McCarter (U.S.A.)
Reconstructions of efferent fibers in the postnatal hamster cochlea 127

J.B. Nadol Jr. (U.S.A.)
Degeneration of cochlear neurons as seen in the spiral ganglion of man 141

R.D. Hall (U.S.A.)
Estimation of surviving spiral ganglion cells in the deaf rat using the electrically evoked auditory brainstem response 155

E.M. Keithley and K.L. Croskrey (U.S.A.)
Spiral ganglion cell endings in the cochlear nucleus of young and old rats 169

SIGNAL PROCESSING IN THE AUDITORY NERVE 179

R.C. Kidd and T.F. Weiss (U.S.A.)
Mechanisms that degrade timing information in the cochlea 181

M.C. Liberman (U.S.A.)
Effects of chronic cochlear de-efferentation on auditory-nerve response 209

B. Delgutte (U.S.A.)
Two-tone rate suppression in auditory-nerve fibers: Dependence on suppressor frequency and level 225

MORPHOLOGY OF HIGHER AUDITORY CENTERS 247

E.M. Rouiller, M. Capt, J.P. Hornung and P. Streit (Switzerland)
Correlation between regional changes in the distributions of GABA-containing neurons and unit response properties in the medial geniculate body of the cat 249

D.A. Godfrey, K.L. Beranek, L. Carlson, J.A. Parli, J.D. Dunn and C.D. Ross (U.S.A.)
Contribution of centrifugal innervation to choline acetyltransferase activity in the cat cochlear nucleus 259

J.C. Adams and E. Mugnaini (U.S.A.)
Immunocytochemical evidence for inhibitory and disinhibitory circuits in the superior olive 281

SIGNAL PROCESSING IN HIGHER AUDITORY CENTERS 299

D.H. Johnson, A. Dabak and C. Tsuchitani (U.S.A.)
Function-based modeling of binaural processing: Interaural level 301

J.J. Guinan Jr. and R.Y.-S. Li (U.S.A.)
Signal processing in brainstem auditory neurons which receive giant endings (calyces of Held) in the medial nucleus of the trapezoid body of the cat 321

H.S. Colburn, Y.-a. Han and C.P. Culotta (U.S.A.)
Coincidence model of MSO responses 335

M. Furst, S. Eyal and A.D. Korczyn (Israel)
Prediction of binaural click lateralization by brainstem auditory evoked potentials 347

EVOKED POTENTIALS 361

B.C. Fullerton and N.Y.S. Kiang (U.S.A.)
The effect of brainstem lesions on brainstem auditory evoked potentials in the cat 363

Announcements 391

Author Index 397

Subject Index 399